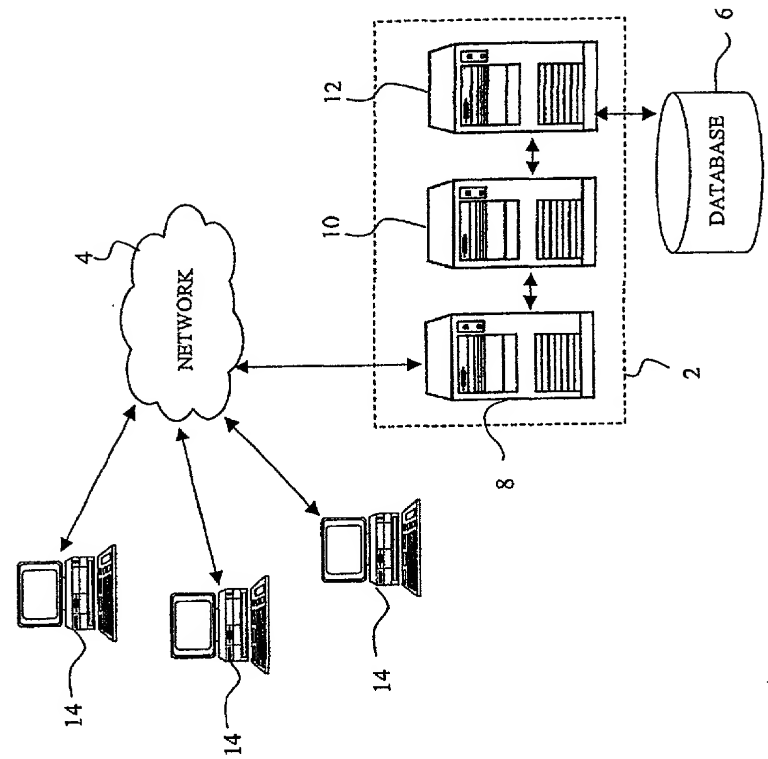

FIG. 1

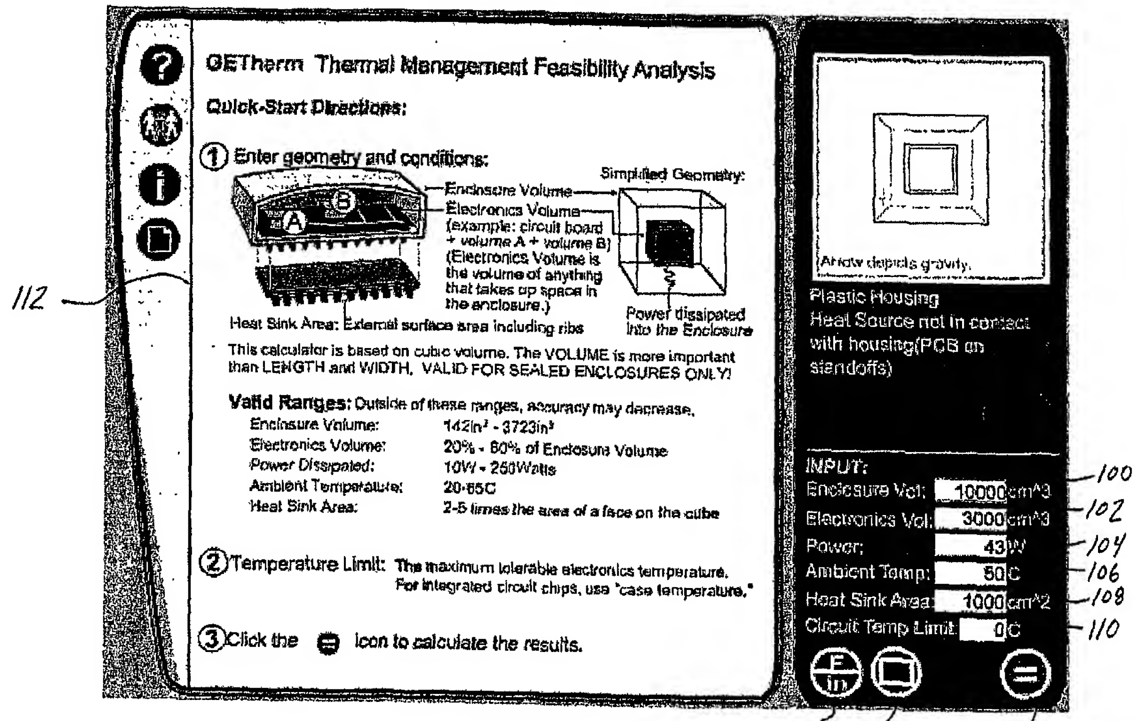
GETherm Thermal Management Feasibility Analysis
Quick-Start Directions:
1 Enter geometry and conditions:
A
B
Enclosure Volume
Electronics Volume
(example: circuit board + volume A + volume B)
(Electronics Volume is the volume of anything that takes up space in the enclosure.)
Simplified Geometry:
Power dissipated into the Enclosure
Heat Sink Area: External surface area including ribs
This calculator is based on cubic volume. The VOLUME is more important than LENGTH and WIDTH. VALID FOR SEALED ENCLOSURES ONLY!
Valid Ranges: Outside of these ranges, accuracy may decrease.
Enclosure Volume: 142in³ - 3723in³
Electronics Volume: 20% - 60% of Enclosure Volume
Power Dissipated: 10W - 250Watts
Ambient Temperature: 20-65C
Heat Sink Area: 2-5 times the area of a face on the cube
2 Temperature Limit: The maximum tolerable electronics temperature. For integrated circuit chips, use "case temperature."
3 Click the icon to calculate the results.
Arrow depicts gravity.
Plastic Housing
Heat Source not in contact with housing(PCB on standoffs)
INPUT:
Enclosure Vol: 10000 cm^3
Electronics Vol: 3000 cm^3
Power: 43 W
Ambient Temp: 50 C
Heat Sink Area: 1000 cm^2
Circuit Temp Limit: 0 C
E
in
112
100
102
104
106
108
110
114
116
118

FIG. 2

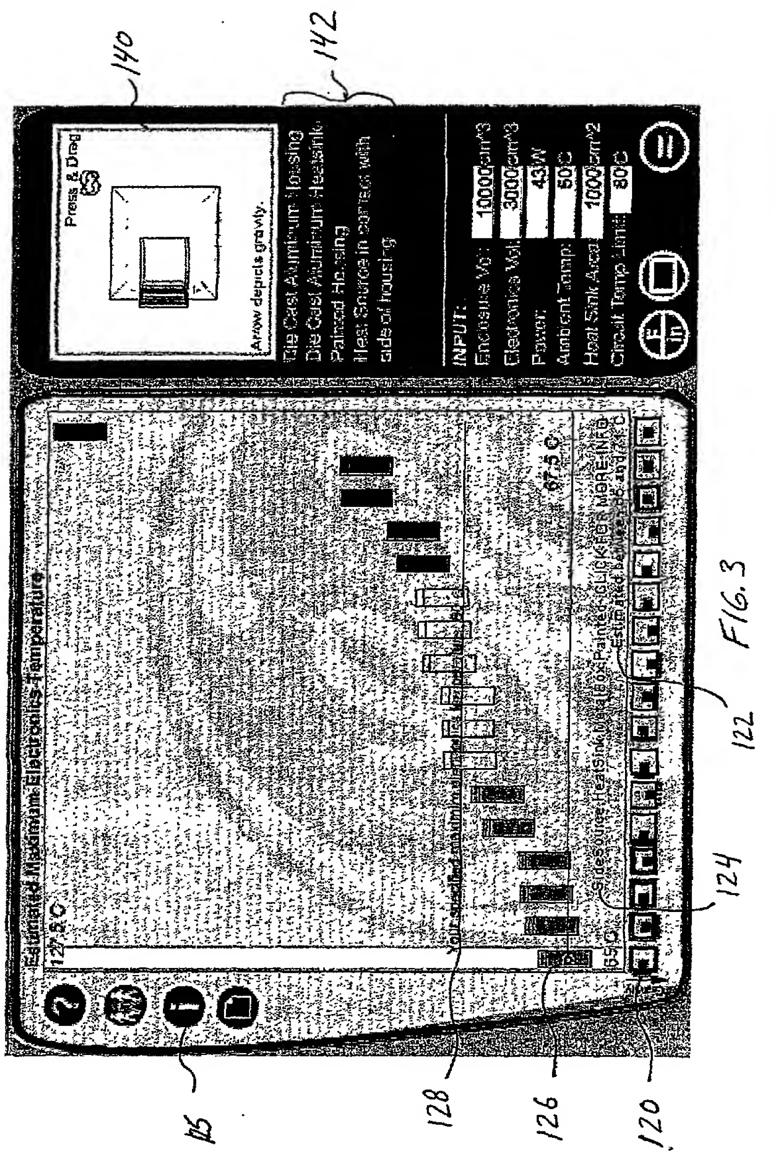
Estimated Maximum Electronics Temperature
127.5C
67.5C
Press & Drag
Arrow depicts gravity.
Die Cast Aluminum Housing
Die Cast Aluminum Heatsink
Painted Housing
Heat Source in contact with side of housing
INPUT:
Enclosure Vol: 10000cm^3
Electronics Vol: 3000cm^3
Power: 43W
Ambient Temp: 50C
Heat Sink Area: 1000cm^2
Circuit Temp Limit: 80C
140
142
128
126
120
124
122

FIG. 3

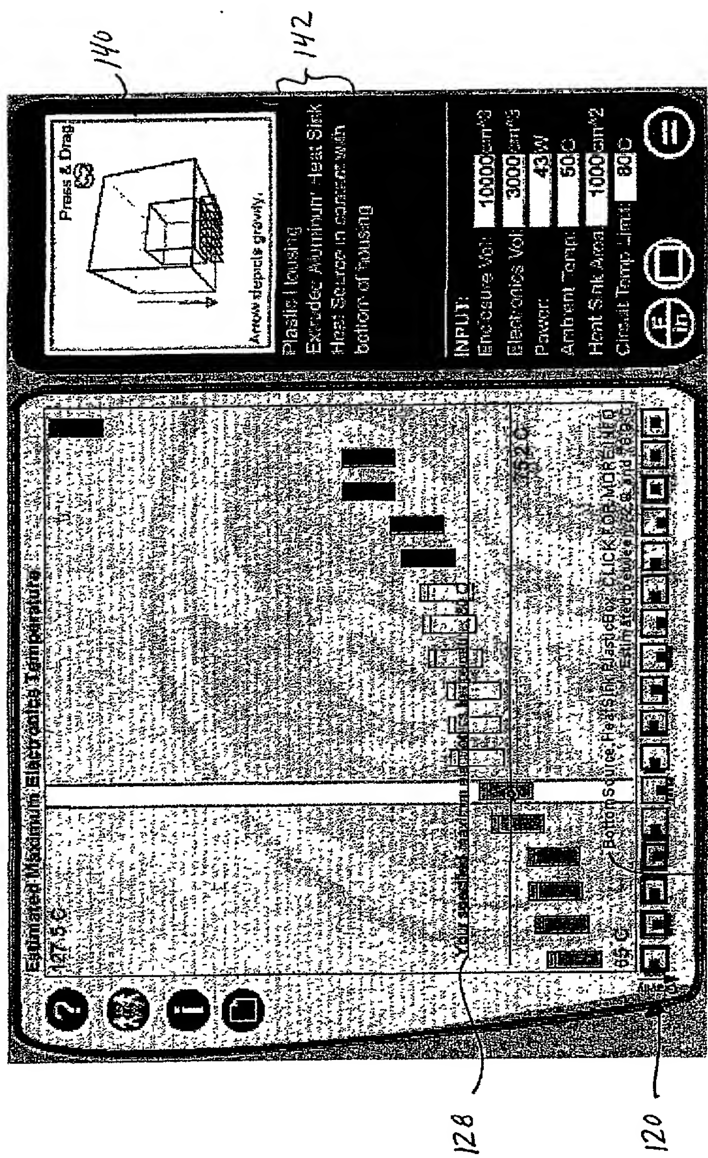
140
142
124
128
120
Press & Drag
Arrow depicts gravity.
Plastic Housing
Extruded Aluminum Heat Sink
Heat Source in contact with bottom of housing
INPUT:
Enclosure Vol: 10000 cm^3
Electronics Vol: 3000 cm^3
Power: 43 W
Ambient Temp: 50 C
Heat Sink Area: 1000 cm^2
Circuit Temp Limit: 80 C
Estimated Maximum Electronics Temperature
147.5 C
65 C

FIG. 4

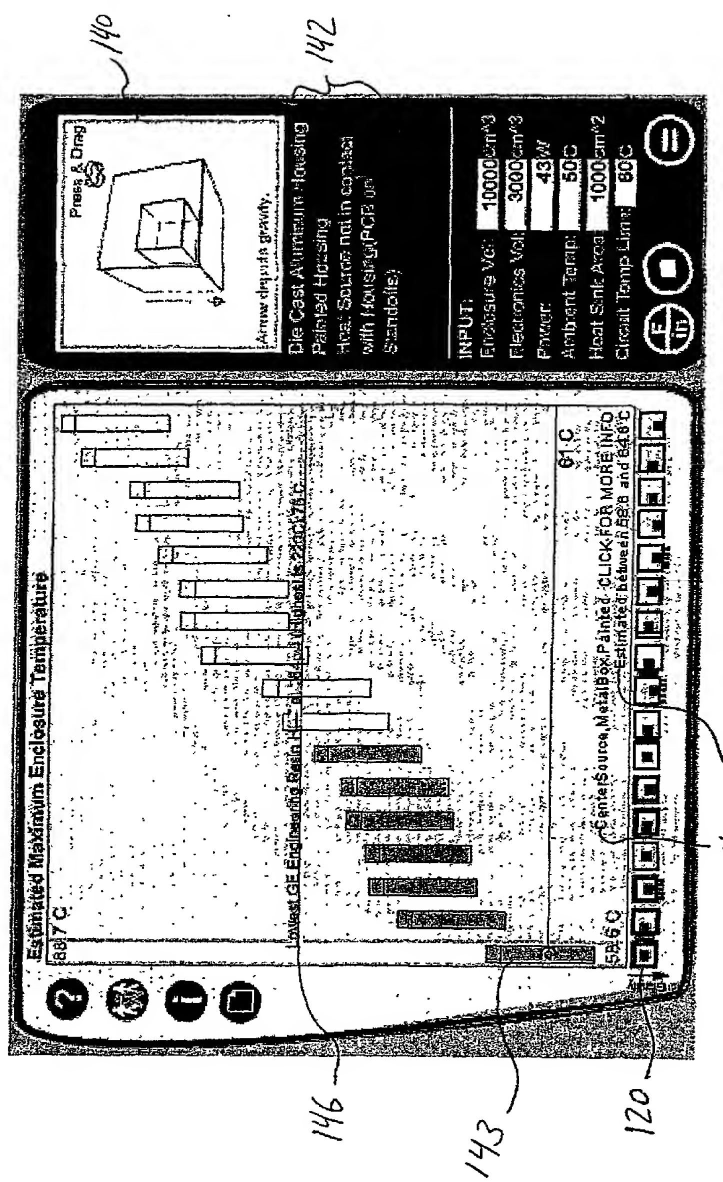
Estimated Maximum Enclosure Temperature
Die Cast Aluminum Housing
Painted Housing
INPUT:
Press & Drag
140
142
143
144
146
120
124

FIG. 5